

THE CLAIMS

What is claimed is:

1. A frozen dessert comprising a composition of partially frozen water, proteins, fat, sweetening agents and at least one stabilizing agent, with the sweetening agents forming a mixture which contains glucose and optionally fructose, these two compounds constituting, as a whole, from 6 to 30% of the total weight of the composition, and with the stabilizing agent comprising a compound having a sufficiently small particle size to act as nucleating agent for water crystals during freezing of the composition so that the composition, independently of any incorporation of gas, is malleable and extrudable at freezing temperatures.

2. The dessert of claim 1, wherein the stabilizing agent comprises microcrystalline cellulose in an amount of from 0.1 to 1% by weight relative to the total weight of the composition.

3. The dessert of claim 1, wherein the partially frozen water is present in an amount of from 40 to 62% by weight relative to the total weight of the composition.

4. The dessert of claim 1, wherein the at least one stabilizing agent includes an emulsifier or thickener, with all stabilizing agents being present in an amount of from 0.3 to 2.7% by weight relative to the total weight of the composition.

5. The dessert of claim 4, wherein the thickener is carob gum, guar gum, a carrageenan, an alginate, gelatin, a carboxymethylcellulose (CMC) and the emulsifier is a mono or and diglycerides of a fatty acid, a sucroester or egg yolk.

6. The dessert of claim 1, wherein the mixture of sweetening agents comprises at least 90% of its weight of glucose and the optional fructose, and includes polymers of n molecules of glucose, n being an integer between 2 and 10, inclusive, with the polymers representing from 10 to 50% of the weight of the mixture of sweetening agents.

7. The dessert of claim 6, wherein the glucose polymers are present in an amount of 60 to 70 % along with a glucose syrup containing from 30 to 40% by weight of glucose and less than 1% by weight of fructose.

8. The dessert of claim 1, wherein the composition further comprises from 1 to 3% by weight of glycerol.

9. The dessert of claim 1, wherein fat is present in the composition in an amount of from 4 to 20% by weight relative to the total weight of the composition.

10. The dessert of claim 1, wherein the fat contains at least one fat of plant origin having an onset of solidification temperature of less than 0°C and, optionally, one or more fats of plant or animal origin having an onset of solidification temperature of between 0 and 40°C.

11. The dessert of claim 10, wherein the fat is chosen from the group consisting of sunflower oil, sunflower oil rich in oleic acid, grapeseed oil and a butter oil fraction.

12. The dessert of claim 1, wherein the proteins are present in an amount of from 3 to 18% by weight relative to the total weight of the composition.

13. The dessert of claim 12, wherein the proteins are proteins of plant origin or proteins of animal origin provided by whole, skimmed or partially lactose-free milk or a derivative of milk origin.

14. The dessert of claim 13, wherein the derivatives of milk origin are demineralized whey or demineralized and lactose-free whey.

15. The dessert of claim 13, wherein the proteins of plant origin are obtained from leguminous plants.

16. The dessert of claim 1, which further comprises adjuvants, flavoring inclusions or other preparations.

17. A process for manufacturing a frozen dessert which comprises:
mixing proteins, sweetening agents, and stabilizing agent(s) with water to obtain a premix which is liquid at temperatures between about 25 and 70°C, wherein the sweetening agents form a mixture which contains glucose and optionally fructose, these two compounds constituting, as a whole, from 6 to 30% of the total weight of the composition, and the stabilizing agent comprises a compound having a sufficiently small particle size to act as nucleating agent for water crystals during freezing of the composition;

adding a fat to the premix with stirring, and homogenizing the resulting composition at a pressure of between 10^6 and 10^7 Pascals and at a temperature of between 60 and 85°C;

cooling the homogenized mixture to a temperature of between 0 and 10°C;

maturing the cooled, homogenized preparation for a period of between 1 and 24 h at a temperature of between 2 and 6°C, and

packaging the matured preparation, in liquid form, in a container while reducing temperature to a value of less than or equal to -15°C, thus nucleating water crystals during freezing of the composition; so that the composition, independently of any incorporation of gas, is malleable and extrudable at freezing temperatures.

18. The process of claim 17, wherein the stabilizing agents include emulsifiers and thickening agents, and which further comprises adding flavorants and other adjuvants or additives after cooling of the homogenized mixture.

19. The process of claim 17, which further comprises pasteurizing or sterilizing just before or after homogenizing by direct injection of steam, by spraying the composition into steam or by indirect heat exchange for a period of up to 1 minute.

20. A process for manufacturing a frozen dessert which comprises:
mixing proteins, a fat and stabilizing agent(s) with water to obtain a premix which is liquid at temperatures between about 25 and 70°C, wherein the stabilizing

agent comprises a compound having a sufficiently small particle size to act as nucleating agent for water crystals during freezing of the composition;

adding sweetening agents and other ingredients to the liquid composition with stirring, with the water content being adjusted to between 40 and 60% by weight relative to the total weight of the composition, wherein the sweetening agents form a mixture which contains glucose and optionally fructose, these two compounds constituting, as a whole, from 6 to 30% of the total weight of the composition;

homogenizing the resulting liquid composition at a pressure of between 10^6 and 10^7 Pascals and at a temperature of between 60 and 85°C;

cooling the homogenized mixture to a temperature of between 0 and 10°C;

maturing the cooled, homogenized preparation for a period of between 1 and 24 h at a temperature of between 2 and 6°C, and

packaging the matured preparation, in liquid form, in a container while reducing temperature to a value of less than or equal to -15°C, thus nucleating water crystals during freezing of the composition; so that the composition, independently of any incorporation of gas, is malleable and extrudable at freezing temperatures.

21. The process of claim 20, wherein the stabilizing agents include emulsifiers and thickening agents, and which further comprises adding flavorants and other adjuvants or additives after cooling of the homogenized mixture.

22. The process of claim 19, which further comprises pasteurizing or sterilizing just before or after homogenizing by direct injection of steam, by spraying the composition into steam or by indirect heat exchange for a period of up to 1 minute.

23. A frozen dessert which can be easily distributed in an overrun state, which comprises:

a pressurized container,

a malleable and extrudable frozen dessert in the frozen state and contained in the container;

a propellant gas contained in the container and intended to urge the dessert out of the container, and

means for distributing the frozen dessert from the container.

24. A frozen dessert which can be easily distributed in an overrun state, which comprises:
a pressurized container,
a malleable and extrudable frozen dessert according to claim 1 and being in the frozen state and contained in the container;
a propellant gas contained in the container and intended to urge the dessert out of the container, and
means for distributing the frozen dessert from the container.

25. A pressurized container allowing the distribution of the frozen dessert of claim 1, which comprises, in a chamber closed by distribution means, a sliding piston or a bag which separates, on the one hand, a pressurizing propellant gas and, on the other hand, the frozen dessert to be distributed, wherein the distribution means is arranged on one side of the piston or bag where the frozen dessert is present, in the vicinity of an end of the piston stroke or of the top of the bag.

26. The container of claim 25, wherein the frozen dessert contains an overrun-producing gas, optionally in a dissolved state.

27. The container of claim 25, wherein the propellant gas has a pressure, at the start of distribution, of between 5×10^5 and 12×10^5 Pascals, and the distribution means has a passage cross section of between 125 and 300 mm², whose opening and closure are obtained by means of a rotating device or a device with a relocatable pusher.